

THE
INRICHMENT
Of the VVeald of
KENT.

OR

A Direction to the Husbandman, for
the true Ordering, Manuring, and Inriching of
all the Grounds within the VVealds of *Kent*, and
Suffex; and may generally serve for all the Grounds
in England of that Nature: As

1. *Shewing the nature of Wea'dish Ground comparing it with the
soyle of the Shires at large.*
2. *Declaring what the Marle is, and the severall sorts thereof, and
where it is usually found.*
3. *The profitable use of Marle, and other rich manuring, as well in
each sort of Aweble Land, as also for the increase of Corn and Pasture
through the Kingdome.*

Painfully gathered for the good of this Island, by a man
of great Eminence and Worth, but revised, enlarged, and
corrected with the consent, and by conference
with the first Author.

By G. M.

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TO THE
HONOURABLE
Knight, Sir **GEORGE RIVERS**
of Chafford, in the County of
KENT.

SIR,



Ad I no Scale (more than this bare
and plain moulded Epistle,) by which
to come to your worthy eares, yet in
respect of the honest livery which it
carries, (being necessary and husbandly
Collections, especially gathered for the
Country and Soyl wherein you live) I
know it cannot chuse but find both fa-
vour and mercy in your acceptations; but
when I call into my consideration the
great worthiness of your experience in this and all other like
affairs, which tend to the general benefit of the Common-wealth,
and weigh the Excellency of your Wisdome, Judgment, Bounty,
and Affection unto Hospitality (which giveth both strength and ad-
vancement to projects of this nature) I could not but take unto
my self a double encouragement, and boldly say unto this Work
which I offer unto your goodnesse, Go and approach with all thy
sweetness before him, he that so perfectly knows all which thou
canst or wouldst discover; he that is able both to correct and a-

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mend

The Epistle Dedicatory.

mend any thing that is imperfect in thee, bee, for vertues sake, will never forsake thee. Believe me (worthy Sir) should this Subject wish it self a Patron, I do not think it could wish beyond you; for you are a volume full of all that of which it increaseth: witness your years, your supportation of the poor, and your continuall employment; with any of which there is not (of your ranke) a second living in your Countrey, to walk hand in hand with you. Being then (dear Sir) the oldest and best friend to your Countrey, forsake neither, nor this which comes to serve it; and though in this Glass some lineaments may appear imperfect; yet by the help of your favour (though little be exact, or most excellent) nothing shall be gross or unworthy the survey of your worthier patience. And so I rest,

Yours to be commanded

Gervase Markham.



A Discourse of the Weald of Kent; and a comparison of Arab's lands there'n, with the other parts of the Shires. Together with some necessary counsels for the ordering and enriching of the marleable Lands in the Weald, as generally in any part of this Kingdome.

THe Weald of *Kent* is the lower part of that shire, Further Ad-
 lying on the South side thereof, and adjoyneth to ditions.
 the Weald of *Sussex*, to the west.

The Weald, both in *Kent* & *Sussex*, was sometimes all (or the most part) woody, Wild, and (in the first times) un-inhabited, and from thence took the name of Weald from the *Saxon* word, *Weale*, or *Teale*, or *Weald*, which signifieth a Woody Country, or Forrest like ground. The *Brittans* called it *Andred*, which signifieth Greatnesse or Wonderfull, and in *Latine* it was called *Salus Andred*, (that is to say) the Chase or Forrest of *Andred*, by reason of the great circuit, or large bounds thereof.

Touching the true boundary or limits of this Weald, there have been divers opinions, and most of them various, and much differing both in place and quantity, but that which is the neerest & best allied unto truth both according to the opinions of *Asserius Menevensis*, *Henry of Huntingdon*, and others of most credible report, is, that it extendeth from the City of *Winchelsea* in *Sussex* an hundred and twenty miles in length towards the West; and thirty miles in breadth towards the North. Now although this report be most agreeing unto verity, yet who knows not that curiosity may raise up many objections to withstand it: and therefore Mr. *Lambert* in his *Perambulation of Kent* hath prescribed the best and most infallible way to find out the true and

certain bounds of this Weald, to be onely by Jury, or the Verdict of twelve men impannelled for that purpose, either in case of controversie, or other particular search; and this hath been in these latter times brought forth most plentifully: for it hath been found by diverse late Verdicts, upon speciall and most necessary occasions, than the Weald of *Kent* is truly, Mr. *Lamberts* second step in his Perambulation of *Kent*, reaching from *Wincestrey* in *Sussex*, and what hill there, unto the top of *Rivers Hill* in *Kent*; and neither farther towards *London*, nor thorer towards *Tunbridge*; which agreeth so perfectly with the former limitations, that both may be received as most true and sufficient.

This Weald was for many yeares held to be a Wild Desert, or most unfruitfull Wildernesse (as write the authors before mentioned) and indeed such is the nature and disposition of the soyl thereof to this very day: for it will grow to frith or wood, if it be not continually manured and laboured with the plough and kept under by tillage; so as it may truly be said of it, *Incultis reparantur vomere Sylva*. It is throughout (except in very few places adjoyning to brooks or Rivers) of a very barren nature, and unapt either for pasturage or tillage, untill that it be helpen by some manner of comfort, as dung, marle, fresh earth, fodder, ashes, or such other refreshings; and that seemeth to have been the cause for which in old time it was used as a Wildernesse, and kept for the most part with herds of Deer, and droves of hogs as is specified in divers historical relations.

And as there be yet remaining in *Sussex* divers great forrest and sundry commons or wasts, having five or six miles in length, which for the most part are not fit to be manured for Corn, and yeeldeth but little profit in pasture; so have there been also in *Kent* (within our memory) a great number of woody and over grown ground, converted of late, even after such a manner as in the said Perambulation is testified; where it is said; That although the Weald of *Kent* belonged to sundry known owners long since, yet was it not then allotted into particular Tenancies, as the other parts of the shire were, but it was, in process of time, by little and little gained, as men were contented to inhabit there, and to rid it of the wood. And hercof it is also, that besides sundry whole parishes which be

be named dens or low places, as *Tenderden*, *Malden*, *Beneden*, and sundry other, there be moreover many smaller portions almost in every part of the Weald of *Kent*, which he likewise called Dens; as the Den of *Cranebrook* in *Cranebrook*, the Den of *Hawkhurst* in *Hawkhurst*, and such others; the which (as it seemeth) were at the first undertaken to be manured by sundry particular persons, whose names were then taken for those very Dennes and continued many yeares together, as by ancient evidences it doth yet appear, howsoever the age of long time hath now almost worn and consumed them all out of knowledge. Neither doth the Weald of *Kent* contain so many great manors or courts (for the proportion of the largenesse) as the rest of the Shire doth, but was appertaining, for a great part thereof, to sundry of those manors which do lye at large dispersed thorow the Shire, whereof each one had a great portion in the Weald, which both in the book of Dooms-day, and in sundry the court-Rolls, and Rentals, passeth by the name of Weald, and *Silva Porcorum*, or swine gats, which were granted to divers of the farmers and owners of sundry tenancies which did belong unto those dens and other Lands within the Weald.

And albeit these dennes be for the most part good large portion of lands, that be now broken into many several possessions, so as the same one Denne suffieth twenty Householders at this day, yet it is very likely that each man at the first had his several Denne wholly and unbroken, whereof he and his posterity beareth name, untill that the same was by the custom: of *Gavel-kind*, by sale or by exchange divided and distributed amongst others into parts, as we do now see them. But howsoever this Weald be of it self unfruitfull (as I said) and of a barren Nature, yet so it hath pleased the providence of the Almighty to temper the same, that by the benefit of Margle or Marle (as it is commonly called) it may be made not onely equal in fertility with the other grounds of the shire, as well for corn as Grasse, but all superiour to the more and greater part of the same. The which manner of bettering the ground is not now newly discovered, but was the ancient practise of our forefathers many yeares agoe, as by the innumerable Marl-pits digged and spent so many yeares past, the trees of 200, or 300, years

The use of
Marl is an-
cient

Marling was discontinued and is now revived.

years old, do now grow upon them, it may most evidently appear; besides the which we have mention of Marle in books of gainage or husbandry, that were written in the dayes of K. Edward the 2d. or before, howbeit the same manner of tillage, by means of the civil Warrs, maintained many yeares as well in the time of the Barons warrs, as of the warrs between the house of York, and the family of Lancaster, was so given over, and gone out of use, untill these thirty or forty years, that it may be said to have been then newly born and revived, rather than restored, because the very true art of inriching the ground by Marle, seemeth to lye hidden in part, as yet not to be discovered to the full: for in this short time we have seen many arable grounds, which for sundry years after the marling of them, have plentifully born Wheat and other grain, to be now become unfruitfull, and so will they continue, albeit they should be now marked again. And this commeth to passe by the ignorance of the right manner of ordering the Marle, which is as strong and cheerfull as ever it was before, howsoever it worketh not this naturall effect, through the unskilfulnesse of the Husbandman, that both wasteth the Marle, and loseth withall his time, his labour, his cost, and the profit of his ground. I cannot deny but a man shall see some grounds of nature fit to take Marle, and of situation so neer to Marl-pits long time opened, that they might be marled plentifully with little charge, and have been heretofore marled indeed, and yet the same to lye now unplowed, and not only barren of themselves, but also unapt for marle, and incapable of amendment by tillage: but I must say withall, that albeit the men in those former ages had the right ordering of Marle, yet were they not all good Husbands alike, neither doth the field joy alike under the Farmer, and under the very Owner of the same, the one seeking the very uttermost gain that may be made during his short interest, and the other endeavouring to perpetuate his commodity, even to the end of his estate, which hath no end at all: so that through unskilfulnesse of the one, and greedinesse in others, the ground may sooner be crammed to death with Marle, then it shall be made the better or fatter by it. The reason whereof I will reserve untill that I have cause to teach in particular after what man-

ner and measure the ground is to be marled. In the mean while I will open the nature and conditions of this Wealdish ground, comparing it with the Soyl of the shire at large, and afterward declare unto you what the Marl is, and what sorts thereof there be usually found in the Weald of Kent, and lastly enter into the true and profitable use thereof, as well in each sort of arable Land, as also for the increase of Corn and Pasture through the Kingdome.

The arable ground of this Weald hath commonly a fleet and shallow mould to be turned up by the Plough, so as in many places the dead earth or mould is within three inches of the face of the ground, and in the best places, the good Mould exceedeth not six inches in depth at the most, and therefore, it wanteth convenient substance to nourish Corn any long time, but will faint and give over after a crop or two; for the which reason also, it cannot yield any sweet or deep grasse. Besides this, the Weald hath many copp'd or hillish grounds, out of which there do many Quits or Springs of water issue, that make it cold and barren; and from these hillocks, the best part of the good Mould is washed down into the Water courses and Dykes that be made to divide and drain the Land. Furthermore the Weald is divided into many small inclosures, the biggest sort (for the most part) of which, are between sixteen Acres and twelve in quantity, and thereby hath it many Hedges and Trees, which in unseasonable weather do keep both the Sunne and Wind from the Corn, so as for want of that succour and comfort, it groweth and many times rotteth in the earth, so that it cometh not, nor eareth, nor prospereth not kindly many times. And these small Closes are caused by this, that men are not able to Marle any great part or quantity of ground at once; and having marled a little, they are desirous to sow it with Corn: for the preservation whereof, as also for draining it, they are enforced to make so many and small severalls: for all which reasons it is plain, that there is little good arable Land there, and rarely any good Pasture, those onely places excepted, which are amended by irrigations of floods, which there is called flowing and over-flowing. Contrarywise, the arable land of the Shire at large, hath a deep and fat Mould of good earth, that is

able to bear five or six good Crops together, without intermission; and after 3. or 4. years rest, will do the like again, and may so interchangeably keep that course for ever: yea, there be many grounds that are sowed without ceasing, because the Mould is so deep, that when the upper part thereof beginneth to faint and be weary, men can adde some strength of Cattell, and with the Plough go deeper, and fetch up a fresh Mould that will continue for a long season. Furthermore this arable ground is a hollow dry ground, for the most part, on a deep Clay, that by tillage, and the weather, will become dry and spongy, so as the Rain there washeth in the fat of the earth, the rather because it is not so hillish and sliding as the Weald, but more level, even, and Champion also, by which the Sunne and Wind do dry the Corn, and do make it eare or care well, and yield a purer flowre then that which is sowed in wet, and hath long time lye before it be dried again. But for as much as the great odds between these two sorts of grounds, may be made even by the help of *Marle*, if it be rightly ordered, as I said, I will now shew you what it is, and how many sorts thereof be found in this Weald of our Country. *Marle* is indeed, as it is in name, the fat or (marrow) of the earth: for so did the *Germans*, and so did our elders the *Saxons* terme it, of the word *Marix* which we found *Marrow*, and thereof we call it *marling*, when we bestow that fat earth upon our lean ground. *Pliny* saith, that the *Brittains* (meaning us) did use to amend their Land with a certain invention which they called *marga*, that is, the fat of the earth, and it is to be seen in *Conradus Heresbachus*, that the *Germans* doe use it to the same end, and do call it by the same name till this very day: It is therefore a fat, oily and unctuous ground, lying in the belly of the earth, which is of a warm and moist temperature, and so most fertill; seeing that heat and moisture be the father and mother of generation and growth; howbeit this is not a pure and simple marrow (as that is which lyeth in our bones) but a iuyce, or fat liquor mingled with the earth; as is the fat which lyeth mixed, and dispersed in our flesh, so as the one may be drawn away, and the other remain as it shall anon appear unto you.

Four sorts of
Marle.

Four sorts of *Marle* be found in this Weald, known as under

der by the difference of colours, and thereby also differing in degrees of goodnesse one from the other: for there is a gray, a blew, a yellow, and red Marle, all which be profitable, if they be earthy and fat, or slippery as soape: and most times little worth, if they be mixed with sand, gravell, or stone. So the blew is reputed the best, the yellow the next, the gray the next, and the red lesse durable then the other three; and yet it is thought the red to be the better, if it be found upon the blew, or others. These Marles do lye in veins or flowers, amongst those hillocks or copped grounds most commonly, whereof I have spoken, and do oftentimes shew themselves at the foot of the hill, or about the mid way, between the foot and the top thereof: some of them have over them a cover of ground, which we call Cope, not exceeding seven or eight foot in depth, some ly: deeper, and other some do arise, as namely, where the ground lyeth not high, and that Marle commonly is very good; and there is in diverse levell grounds good Marle.

1. 2.
3. 4.

And as Marle is for the most part of these four colours, so is arable ground for the most part of these four sort following; that is to say, either a cold, stiffe and wet clay which is either the Cope of the Marle, or lyeth nizer unto it, and is therefore commonly called, *The Marle Cope ground*, or a Hazell Mould, which I count to be one of the best wealdish Moulds, being a compound Mould, and very good for Marle, and will quit the cost very well. Then there are two sorts of sandy Mould, the one being a reasonable good kind, but not equal to the hazell Mould, for you shall have in divers places of the Weald, this hazell mould to bear two or three good crops of Wheat, being Summer fallowed, together, which you shall hardly have of any sandy ground without mending: but as I said of the better sort of these two kinds of sandy moulds, you have commonly very rich Wheat, being well Marled, which is not so barren as the other; but this last kind of sandy Mould is a very barren kind of ground, and hath a very flect Mould, and you shall have very heath grow upon it in divers places, and yet being ordered, as followeth, with Marle, will bear both good Corn

Four sorts of
Grounds.

1.

2.

3. 4.

and Pasture. And now that we may the better understand how to Marle and Manure every of these sorts by it self, you must know, that the hazell ground being dry, and not subject to Winter-springs, or tears of water, (for which, some call such, A whining or weeping ground) is to be handled thus.

The ordering
of the Hazell-
Mould.

First, Plough it as deep as you can, with the strength of eight beasts at the least; and be not afraid to Plough up some part of the dead earth that lyeth under the upper good Mould: for the Sun, the Rain, the Wind, and the Frost, will in time mellow and amend it; and besides that, the Mould will be the deeper for a long time after, and thereby keep it selfe the longer from being stiffened with the Marle. Then you may bettow 500. Cart-loads (as we call them) of Marle upon each acre thereof, every load containing 10. or 12. bushels of eight gallons; and each acre containing 160. rods of 16. foot and a half to a rod. Then also you may chuse whether at the first breaking up you will sow it with Oates, to kill the grasse, or else first Marle it, and sow it with Wheat, or otherwise Summer-fallow it in the May after the Oates, and then Marle it, and sow it with Wheat. Upon that fallow or gratten, (as we call it) you shall do well to sow it with Pease, and at *Michaelmas* following, to sow that Pease-stubble or gratten with Wheat again, which also will be the better, if the Summer wherein it carried Pease, were moist; because the Pease being rich and thick, do destroy the Grasse, that together with the washing of the fallowes by rain, doth greatly consume the heart and vertue; or, as we call it, the state of the ground. But if that Summer were dry, then is a fallow best, because the Sunne with his heat doth much good to the ground, and inableth it the better to bear out the weather in the Wheat season ensuing. If you like to sow it, as I said, with Pease, sow them as early and timely as you may, for they will be so much the sooner harvested, and then also you may Plough or stirre your gratten the sooner, whereby it will be the better hardned to bear out the weather in the time of sowing of your Wheat: but I doubt, Pease doth somewhat stiffen it. Two bushels of Wheat do suffice for the sowing of an acre hereof, except it be for the first crop, after the

the new breaking up of the ground; during which time, there is found a worm, called an *Emble*, which in *French* signifieth Corn in the ground, being of colour yellow, and of an inch in length, and will eat some part of the Corn; but if you sow it thick, it will be both small eared, and thick, and slender of straw, which the Rain and Wind will beat and hurle down, and then it will scarcely rise again; or if it do, yet through the nearnesse of the shadow of the Trees and Hedges, that in so small closes be many, it will rather rot for want of drying, then come to maturity, that is, to perfect hard, and full grown Corn. After your first Marling, you must carefully fore-see, that you plough not the ground either with deep or broad Furrowes, but steet and narrow, lest you cast your Marl into the dead Mould, for Marl differeth much from Dung in this behalfe; Dung spendeth it selfe upward, and howsoever deep it lye, the vertue thereof will ascend: but Marl, (as saith Sir *Walter Henly*, in his Husbandry) sendeth his vertue downward, and must therefore be kept aloft, and may not be buried in any wise. Furthermore, if your ground be hillish or coppied, it shall be fit that you make your Ridges 7. or 8. foot broad at the least; for in such falling Lands, the more broad Furrowes you make, as you must make many, where you make Ridges, the more of your Marle shall be washed, and carried into the bottomes. It is good also to draw a crosse or quarter-Furrow, and opening the ends of your land Furrowes stopped, into it, to leave the other ends of your Furrowes, that the water-shoot runne not all the length of the field. Again, this ground will alwaies be sown under furrow, and that also before *Michaelmas*, if the season will so permit: for this ground (if it be well husbanded) will be mellow and hollow, or loose, whereby though Rain and Frost, it would sinke down from the root of the Wheat, if it should be sown above Furrow, the which being uncovered, must needs be bitten and killed with the cold. It is also very fit that you harrow not this sort of ground too small, but that you leave the clods as big as a bowl, the which being mouldred with snow and the frost, will both cover and keep warm what is under-

neath. Moreover, it shall be good, that upon some fair and dry day, in the beginning of *March*, you put your flock of Sheep into your Wheat, that with their trampling upon it, the Corn may be well, and fast closed with the earth, yea, and presently after (if it will bear foot) you may roll it as you do Barley, whereby both the Clods shall be broken, and the Gratten or stubble shall be more even and ready for the Mower. Generally you must understand, that after you have bestowed your *Marle* in the field, you ought to let it lye unspread abroad, untill you be ready to plough, and then immediately after the spreading of it, turn it into the ground with the Plough; for otherwise, if it should lye long spread in the field, the Sunne will spend no small part of the fatnesse thereof, although I know many desire it, because it will be the smaller being burned with the Sunne; which I like not. And therefore also no good Husband will carry and spend his dung in the time of Summer, except he do presently withall plough it into the ground; for although the Mould of the arable Land it selfe will take good, if it be turned to the Sunne, which will both dry and fasten it, yet the matter fareth far otherwise with the *Marle*, from which if the Sunne shall draw and suck the fat moisture that maketh the Land fertile, then becommeth it (as *Columella* speaketh of the worst sort of ground) *Solum siccum, pariter & densum & macrum, quod siue excecatur, siue cessat colono refugiendum est.* It becometh (saith he) a dry, thick, and lean Clod, which whether it be tilled or laid to rest, must be forsaken of the Husbandman as unprofitable. And now your Hazell mould being thus marled, plowed, sown, and manured, you may not charge with Wheat above twice, and then it must rest five or six years together; all which time it will bear a very good and sweet Pasture, well set with a white Clover, or three leaved grasse, most batning and profitable, both for Sheep and Bullocks.

After those years ended, it will grow to some Mousse, or will peradventure cast up Broom; and then it is time to break it up, and sow and handle it as before, for two other Wheat-seasons, or crops, leaving it a Wheat-gratten or stubble, rather than with an Oat gratten or stubble, which bur-

burneth the Land being marled. Being thus interchangeably sowed and rested, your Hazell mould will continue good arable and pasture, by the space of thirty years together, whereas if it should be continually sowed, six, or seven, or more years together without rest, it will become utterly unfruitfull, both for Corn and Cattell also. Neither will it any thing avail to marle it over again, when it is so decayed, because the former marle having his juice exhausted by continuall Tillage, whereof the Corn sucketh one part, and the Sunne, Wind, and Weather dry and wasteth the rest, is but a dead Clod (as I said) that is not capable of new *Marle* to amend it, nor casteth any profitable grasse at all. For proof hereof, I my self have seen, that the common caith of High-ways, by treading of Cattell, washing of Rain, and the drying of the Sunne and weather, lay separated from the naturall juice, which it had in the pit, and spreading it upon the ground, I saw that the land was not onely not amended; but much the worse by it. And now for an end of handling this sort of Hazell ground; if it shall appear unto you that five hundred loads of *Marle* upon the Acre, have clanged, stiffened, and too fast bound your land (as indeed the nature of *Marl* is to bind and to stiffen) then take you some of these waies to help it: either rest it four or five years, or fodder upon it before you bring it up with so many Cattell as you may; or take the uppermost part of your Ditches or Fore-lands, or wast places of your fields which you may mingle with Dung, and which, before you sow your Wheat, you may lay upon your fallow and stir it in with your plough, and by this you shall both loosen your *Marle*, and refresh your ground: so that within forty years, the mould of your ground will clean eat up and swallow the *Marle* that you lay upon it; and then become hungry, and is capable of *Marle* again as it was before at the first.

And by this also you may see the very cause for which it is good, not to sow your marled land continually, but to pasture it by turns, and so give it rest; namely, because the continuall plowing doth exhaust and spend the fat of the *Marl*, leaving the drossie, dry, and fruitless parts thereof, to lye and cover the face of your ground: whereas pasturage, through the dunging

crea

treading, and foddering of Cattell, doth increase a new Mould, which mingling it self with the dead Mould, doth in the end give some life and heart unto it. And therefore these Farmers and Owners that have been at the cost to Marle their ground, and will not forbear to till it, but hastening to raise their charge, do thereby utterly strike it with barrenesse, are like to *Aesops* man, who having a Hen that layed him every day a golden Egge, and being greedy to have all the gold at once, did therefore kill the Hen, thinking to have found her belly full of gold, and so was both defrauded of that he looked for, and lost also what he had before. Hitherto of the nature, ordering and marling of this hazell ground. Generally now for the continuall fallowing and stirring thereof, you must understand, it may neither be fallowed wet, lest it answer more Grass than Corn; nor yet so dry, that the dead bottom swell up, as in great growth it will; and swallow the good Mould that lyeth above: and therefore bind not your selfe to any precise time of any month, but the opportunity either in *May* or *June*, as you shall find the weather to have prepared it for your desire. In the like temper you ought to stir it after a shower, after *Saint James* his day, or in the end of *July*, for so will it be dry and hard before the time of sowing: whereas if it be stirred later, every small Rain will destemper it into Dirt or Mire, by reason of the tenderesse thereof, and then can you not fitly bestow your seed upon it.

The ordering
of the Marle
Cope ground.

The Marle Cope ground followeth, which is most commonly, (as I said) a stiffe, wet, cold Clay, and not so fit as the former to be marled for Corn, except in some few flete places thereof, but yet it may serve for Pasture or for Oates; such of them as be marled, must be fallowed flete or shallow, lest the marle become drowned in the wet: then being marled, they may in dry Summers, (and not over-moist Countries) bear Wheat in some mediocrity. Three hundred loads at the most of Marle are sufficient for an acre of this kind, and two bushels, and a halfe of Wheate will sow the same, which must be cast above furrow, fourteen, or twenty dayes before *Michaelmas*. It requireth round, high, and narrow Ridges, and that the

the water-furrows be stricken somewhat deep, the better to convey moisture from the Corn, and that it be left cloddy as much as may be : and yet to say the truth, such as will convert this sort of ground to Tillage, must provide a greater quantity of rich ground or Greet (as we term it) and Dung, than of Marl it self, to amend this Land withall. But if there be any ground that is light and whining, or weeping, because of Springs that are therein, and therewith doth cast up Rushes, let that be marled upon the green Land with four hundred or five hundred loads upon the acre, about the latter end of Summer ; for so will the Marl sink into it, and cast up a sweet grasse for eight or ten yeares together, and until that the Marle be sunk so low, that another sward or crust of earth be grown over it, and then it is fit time to plow it, but yet very flete and narrow, for so will it bear good Oats ; but if it be so wet that you cannot adventure to sow your Wheat upon it, because the Rushes be not killed with this first plowing, then may you sow it againe with Oates, drawing good water-furrowes to drain it, because it will be the wetter for plowing, and thereby the Marl also will the sooner lose his force, thus doing, let it lye to pasture again.

There be some other grounds of the Marle Cope, which carry a soure Grasse, and the Dyers-weed, (commonly called Greening weed) and having a great tore thereof, the which also may be amended by three hundred or four hundred load of *Marle* upon the acre of the green land : for the *Marle* wil both rot the tore or vesture thereof, and also enrich the Mould very much ; so as it will answer good pasture twelve years after : and when you shall perceive that the *Marl* is well sunk, then may it be Ploughed flete and narrow, sowed with Oats and fallowed ; so may it both bear good Wheat, if it find a good season, and be the richer a long time after partly by the benefit of the *Marl*, partly by the rotting of the tore and sward, and partly by the dung and water of the Catrell that pasture upou it : for the sweeter the Pasture is, the more beasts it feedeth, and the more beasts it beareth, the more it selfe is amended by it.

Touching the fallowing of this ground, great heed is required: for as it swelleth more then the Hazel-ground, if it be taken hard and dry, so it is more grassie then that, or the Sandy Soyl if you fallow it wet: The season therefore followeth commonly in *April*, or in the beginning of *May*, for to fallow it, and to stir it about *Midsummer*, or so soon after as the rain shall have prepared it meet for your unshod Oxen to labour upon it. Many men fearing to hit the right season for this ground in the Spring of the year, do make it ready by a winter fallow before *Christmas*, and by stirring it before *Midsummer*, if they may; which manner is not to be misliked.

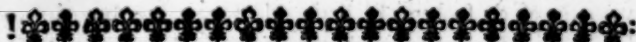
The ordering
of the sandy
moulds.

Lastly, commeth the two sorts of Sandy-ground, and gravelly mould, the one being to be ordered much after the hazel mould, saving he would have somewhat more Marle, and also would be favoured more in the often tillage, than it: for the harsell mould will bear or endure more than the Sand. But this last sort of sandy-ground, being a very staring sand (as we use to call it) for much of it will bear Heath, being of it selfe very barren and very fleet or shallow mould, and over-hot and dry, and by reason of that extremity, is unfertile except it be marled very plentifully. And therefore when you breake up this ground, Plough it as deep as you may, not fearing to cast down the best Mould thereof, because the Marle will pierce thorow, and sink down into it. An acre of this ground requireth five hundred or six hundred loads of your Marle at the least. So alwaies under furrow about *Michaelmas* with two bushels and a halfe upon the acre, which it will better carry than the Hazel ground: for although the straw be smal, yet will it be harder, and stand better than that of the other. The worm whereof I spake, will be busie with that, that groweth on this sort of ground, until that the heat thereof be somewhat asswaged by the Marle. If your ground be hilly, make your Water furrows in such sort, as I have said before, for the saving both of your Marle and Mould, harrow it very little, leave it as cloddie as you may. After that you have taken a Crop from it, fallow that Wheat Gratten or Stubble in *May*; after that stir it also, and then about *Michaelmas* sow it with Wheat again: for
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it is not yet rich enough to bear you good Pease. This done let it rest four or five yeares, and if it send up any plenty of broom cut or pul them when they be of some mean bignesse, but plough not the ground until it have taken such rest; and after it, you may well break it up of new, and sow it with Oates: which Oats-gratten or Stubble, you must summer-fallow, when it is at the Harvest: and then if you desire to have it in good heart, you must Marle it with three hundred or four hundred loads upon the Acre again. After this Crop thus taken, rest it five or six yeares, and then take one Crop more of Oats from it, and after a Summer-fallow, sow it with Wheat, and suffer it to lye a Wheat Gratten or Stubble; till it shall have rested as before is appointed for the hazel ground; and so it will be the better thirty or forty years after the marling. We have in this Weald a sandy and gravelly ground that is wet and weeping, the which is scarcely worth the marling, except the nearnesse of the *Marl*, and thereby the small cost and charge thereof, may intice a man to bestow the cost upon it with *Marle*, and then the best way is to Marl upon the green Land, or upon a fallow, with 500. loads or more upon the Acre, or rather to take the profit thereof by Pasture then by Tillage: for it will hardly bear good Corn, which is soon killed with wet vapour that is continually sent up from the wet springs that lye under it. This sort of wet ground is to be fallowed, when it is both hard and dry, because it swelleth not as doth the hazel Mould, and may therefore be taken in *June*, if former fair weather bring it not to a dry season; and it is to be stirred also after a showre, in the like plight as the hazel mould before. Your marleable grounds being ordered in this wise, severally set down for each kind of them, will continually stand fruitfull either for Corn or pasture, and albeit the high prices which Corn hath of late years carried, may allure some men to sow Corn incessantly and thereby to spend their *Marle*, and to choak their arable in the end; yet I doubt not but the wiser sort can see that it is much better to maintain their grounds hearty and in good plight forever, then to raise a short gaine, that will bring a long and perpetual losse upon them: the rather also, because that Butter,

Cheese, and the flesh of beef and mutton be advanced in price equally, if not beyond Wheat, Rye, Barley, and the other grains. Howbeit, a good Husband will make his profit of them both : for if he have one hundred, or one hundred and twenty aeres of this Wealdish arable, he will so *Marle* and manure them, that dividing his land into five or six equal parts, he may continually plough twenty, or five and twenty acres for corn, and yet lay to pasture the rest by turns, so that by the help of his *Marle* his land shall be continually rich and profitable, both in the one and other of them. And thus I have spoken of the Weald, describing the nature and property thereof : so may every man of discretion and judgment, which shall meet with earth of the same quality and condition (in what part of this Kingdome soever) make application of these Rules before rehearsed, and no doubt but the profit will make both the labour and cost profitable and pleasant.

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*The severall wayes, according to the opinion
of Writers, and the certain wayes, according to the
experience of Husbandmen, for the destruction of Moales,
or Moales which digge and root up the earth, and how to
reduce and bring the ground to the first goodnesse,
having been spoyled by them.*

IT is needlesse either to describe the nature and quality of this Vermine, or the injury and hurt which they do to the Husbandmen Gardiner, and Planter, since no Country is exempt from their annoyance : but touching the remedies, they are of greater secrecie, and therefore I thought good in this place to insert them.

The antient Writers are of divers opinions, touching the manner of destroying this creature, and therefore have left unto us sundry medicines how to work the same : amongst the which one writeth as an approved experiment, that if you take Walnut shels, and fill them with brimstone, chaff, and Petrosin and then setting them on fire, put them into holes or trenches, through which the Moal passeth, the very smel or stink thereof will poyson them ; so that if you digge, you shal find them dead in their holes.

Another affirmeth, that if you take brimstone, and rank stinking litter of horses, and burn it in the holes or haunts of the Moale, it also will impoyson them, so as you shall find they will come out of their Caves, and lye dead upon the green grafs.

A third affirms, That if you take green Leeks, Garlick, or Onions, and chopping them grossely, thrust it into the holes, the very fume or savour thereof will so astonish and amaze the Moales, that they will presently forsake the earth and falling into a trance, you may take them up with your hands. Now there is not any of these medicines which can

be disallowed ; for there is no doubt but that they will work the effects spoken of, if the Moal can bee brought to take a full sent thereof ; but it is a Vermin curious of sent, and passing quick of hearing, and being in a spacious ground, will prevent these baits : and therefore they are rather to be applied for Gardens or little grounds, where there is but a Moal or two, then in large fields, where there be many hundreds.

To conclude for this matter of medicines, or for the helping of Gardens, Hop-yards, or any smal spot of ground, there is not any thing held more available, than to sow in that place the herb called *Palma Christi* ; for it is found by certain experience, that wheresoever that herb groweth naturally of it selfe, or otherwise is either purposely sown or planted, therein no wile will any Moal abide.

Thus much I thought good to shew you for the use of medicine, and for clearing of small grounds : now for the annoyances which happen to great, large, and spacious fields, through the multitude of Moals, there is only three absolute wayes for the curing of the same.

The first is, in the months of *March* and *April*, to view where they cast, and go about to make an extraordinary great hill, in which they build them nests, which is known by the newnesse of the Mould ; then look for the new trench which leadeth to the same ; for as she goeth she returneth : then with your Moal-spade open the trench in divers places, and then very stil and silently, and observing to take the wind, to prevent both hearing and smelling, watch the Moale as she goeth or returneth, which is, Morning Noon, and Evening, and as soon as you see her cast, strike her with your Moale-speare, made of many sharpe pikes, and so cast her up, and kill her, Thus have I scene by one man an hundred destroyed in one day.

The next infallible way for the destruction of Moales is, If you can by any possible meanes bring in water to over-flow and wash your ground, and as soon as the earth is wet over, the Moales will come forth of themselves, and you may gather
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ther them up with your hands at pleasure.

The last (indeed as much approved as any) is to take a live Moale in the month of *March*, which is their bucking or ingendring time, and put it into a deep brasse Bason, or other deep smooth Vessel, out of which the Moal cannot creep, and then at evening bury it in the earth up to the brimme, and so leave it, and the imprisond Moal will presently begin to shrike, complain, or call, so that all the Moals in the ground will come to it, and tumbling into the Vessel, they are prisoners also, and the more prisoners, the greater will be the noise : and the more noise, the more Moales will come to the rescue ; so that I have seen 50. or 60 taken in one night, and in one vessel or brasse Kettle.

Now having thus learned how to destroy the Moales, it is meet you also know how to prevent the comming in of forraign Moales ; because though you keep your ground never so clean, yet if your next neighbour be an ill husband, his field may soon impoyson yours again : therefore to prevent the comming in of any forreign Moale, make but little furrowes or Trenches about your ground, and scatter in them small round balls made of Hemp-seed, or Hemp-seed and *Palm Christi* beaten together, and you shall not need to fear the comming in of any Neighbouring Moales, how many soever there bee about you.

Lastly, for the reducing or bringing the ground to the first perfection again (for howsoever some Husbandmen say, Moe Moal-hills, moe ground ; yet 'tis certaine, that moe Moale-hills, lesse good ground) for never was yet sweet grasse scene on a Moale hill ; therefore to bring it to perfection, which I mean to be meadow ground, or ground to be mown, which Moal-hills cannot be, you shall first with a sharp paring shovel, pare off the swarth about three fingers deep, for fear of hurting the roots of the grasse ; and then the swarth taken off, digge away the rest of the Mould, and scatter it as small as you can round about the hill, then take the green swarth, and cutting it artificially, lay it close and fast, and levell, where you took away the Mould, as if there had never been Hill there : and thus do to all your hills, though they be never
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so innumerable ; and after-all your ground is levelled, as soon as the first shoure falleth, runne all your ground over with a pair of back Harrows, or an Harrow made of a Thorn-bush and it will break the mould as small as ashes, which will so comfort and refresh the root of the grasse, that it will grow in infinite abundance ; and sowrenesse which was caused by reason of the Hills, will come again to a perfect sweetnesse, and the meadow will be more fruitfull then before by many degrees. And thus much for the destruction of Moals, and the reducing of the earth to his first goodnesse,

FINIS.

